Grand Canyon

National Park Service
US Department of the Interior

Grand Canyon National Park
Arizona

Fire Management Plan
Fire Ecology

FIRE ECOLOGY at GRAND CANYON NATIONAL PARK

Grand Canyon National Park contains a great diversity of vegetation types, ranging from desert scrub at the lowest elevations, up through grassland, pinyon-juniper woodland, and ponderosa pine forest, to spruce-fir forest at the highest elevations.

All of these ecosystems are affected by fire to some extent, and it is our goal to restore the natural role of fire wherever possible. Fire plays a larger role in the ecology of some ecosystems than others; it is especially important in the ponderosa pine forests which cover approximately 50,500 acres of the park.

The new fire management plan will address the occurrence of fire in all of these ecosystems, and in many of them, fire will be the primary management tool for ecosystem restoration. Because of this, fire management has the potential to affect a wide range of natural resource management issues and other concerns.

REFERENCE CONDITIONS

The conditions that existed in Grand Canyon's many ecosystems prior to Euro-American influences (circa 1880) are important reference points for resource management.

While there is little information available for some ecosystems, there is more about others. Several sets of data, collected both recently and in the past, exist for the forested ecosystems in the park. Natural resource managers recently used this information to assess how the park's forests have changed from past conditions.

This information will be useful in establishing and refining management goals and objectives for the fire program.

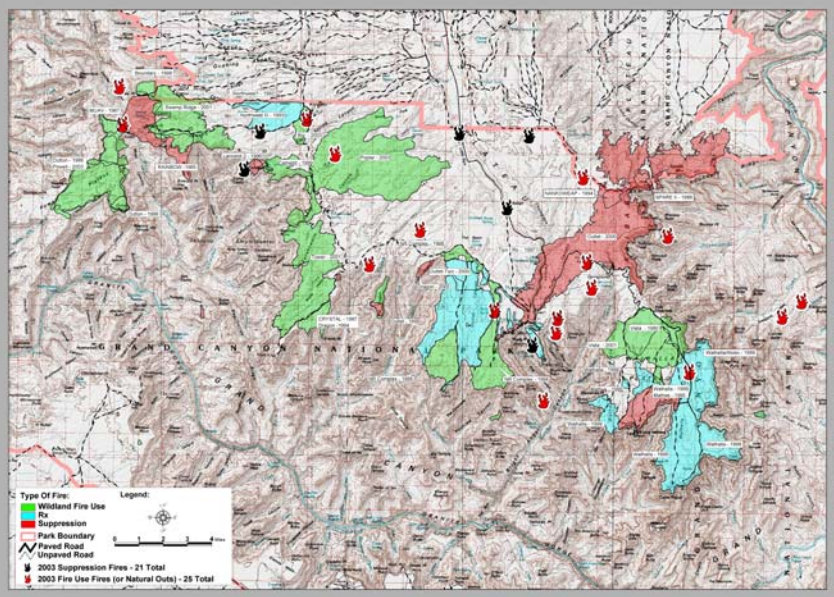
The photo above was taken on the North Rim in 1930; it illustrates the open forest structure thought to be more common in the past. Historical photos like this one can be helpful in describing reference conditions.

FIRE HISTORY

This fire history map is a useful tool in helping managers understand the patterns of fire across the landscape of the park.

The map to the right displays those fires on the North Rim from 1980-2003 that were larger than 100 acres.

The number of fires in 2003 has been typical. Historically, all of these would have been suppressed, but now fire managers seek to strike a balance between suppressing unwanted wildland fires and allowing some fires to burn for resource benefits.



ECOSYSTEM RESTORATION

It is widely agreed that decades of fire suppression, as well as other human activities such as grazing and logging, have greatly altered our region's ponderosa pine forests. The absence of frequent fire has lead to unusually high fuel loads and a greatly increased density of smaller trees. These conditions have set the stage for the large, intense wildfires that are becoming increasingly common in the southwest.

While the need to restore more sustainable conditions is clear, opinions differ as to how best to accomplish this. One of the major challenges is achieving a balance between effectively removing dead fuels and dense smaller trees, while simultaneously preserving the largest older trees.

The new fire management plan will be an important component in the park's approach to this issue.